



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/317,124	05/24/1999	DANIEL E. HINTON SR.	00479.77772	8668

7590 03/22/2004
BANNER & WITCOFF LTD
ELEVENTH FLOOR
1001 G STREET N W
WASHINGTON, DC 022214597

EXAMINER

ZAND, KAMBIZ

ART UNIT	PAPER NUMBER
----------	--------------

2132

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/317,124

Applicant(s)

HINTON SR. ET AL.

Examiner

Kambiz Zand

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/16/2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-159 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-159 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this section can be found in the prior office action.
2. The prior office actions are incorporated herein by reference. In particular, the observations with respect to claim language, and response to previously presented arguments.
3. Claims 1-159 are pending.
4. Examiner withdraws rejection of claims 25-35, 45-53 and 110 under 35 U.S.C 112-first paragraphs due to clarification by the applicant.
5. Examiner withdraws rejection of claims 25-35, 45-53 and 110 under 35 U.S.C 112-second paragraphs due to clarification by the applicant.

Response to Arguments

6. Applicant's arguments filed 10/16/2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "modulating certain characteristics (including non reactive components)of the transmitting circuit, the modulation bandwidth can be increased by approximately 200%", ""changing one or more non-reactive resistive values in the transmitter circuit, which allows the transmitter to smoothly transition between strange attractors, which causes the receiver to go into and out of synchronization almost

Art Unit: 2132

instantly without generating noise”) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As per Applicant’s arguments that the prior art of records does not disclose “changing, in response to an information signal, a non-resistive value in the circuit and thereby causing the first equilibrium point to shift to a shifted first equilibrium point in the current-voltage phase space”, examiner refers Applicant to the following remarks:

- Tao Yang Chua (secure communication via chaotic parameter modulation; IEEE transactions on circuits and systems; vol.43, no.9; September 1996; pages 817-819) disclose an information signal (see line 2 of the introduction on page 17 where the message signal is the informational signal); changing a non-resistive value such as two linear capacitors, a non-resistive circuit by modulation (see page 17-18, equation 7-10; fig.1); and causing a shift in the current-voltage phase space (see fig.1a, item V_R , V_1 and V_2 and fig.1b where the three segment of linear segments are presented that is G_a and G_b).
- Cuomo (5,291,555) disclose an information signal (see col.4, lines 18-22 where the message signal is the informational signal); changing a non-resistive value such as two linear capacitors, a non-resistive circuit by modulation (see col.4, lines); and causing a shift in the current-voltage

phase space (see fig.1a, item V_R , V_1 and V_2 where the change in the capacitors values causes the change in the voltage values and fig.1b where the three segment of linear segments are presented that is G_a and G_b).

- Tresser et al (6,064,701) disclose an information signal (see fig.1-3); changing a non-resistive value such as two linear capacitors, a non-resistive circuit by modulation (see fig.4 and 5 where $C1$ and $C2$ in fig.4 and C_k in fig.5); and causing a shift in the current-voltage phase space (see fig.4a, item V_R , and fig.5, item V_{C1} where the change in the capacitors values causes the change in the voltage values through modulation of information signal (see fig.1).
- Pinknet et al disclose an information signal; changing a non-resistive value such as two linear capacitors, a non-resistive circuit by modulation; and causing a shift in the current-voltage phase space (see page 1021-1022 where the change in the capacitors values C_s causes the change in the voltage values through modulation of information signal V_r for same reasons of above.

Claim Rejections - 35 USC § 112

7. Claims 36-44, 54-109 and 111-159 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the

Art Unit: 2132

specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In view of the wording of the claims language and the large number of claims ,which render it difficult to determine the matter for which protection is sought. In Page 1, line 19 through page 2, line 11 of the specification has clear language that reflects itself in claims 1-24 of the Application but do not relate itself to claims 25-159. Examiner request corrections or clarifications in light of contents of page 1, line 19 through page 2, line 11 of the specification.

8. Claims 36-44, 54-109 and 111-159 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Page 1, line 19 through page 2, line 11 of the specification states "the present inventors have discovered a technique for modulating the transmitting signal in a manner that results in much faster signal stability, thus reducing the amount of time required to synchronize the receiver and increasing the modulation bandwidth dramatically". However Examiner has difficulty relating claims 25-159's language to the above remarks in the specification.

- **Due to large numbers of claims and ambiguity with respect to what the Applicant regards as the inventive steps over prior art, it will be helpful that Applicant clearly disclose the drawing that corresponds to**

all independent claims. Examiner greatly appreciates Applicant's cooperation in this manner.

Claim Rejections - 35 USC § 102

9. **Claims 1-159** are rejected under 35 U.S.C. 102(b) as being anticipated by Pinknet et al (Chaos shift keying communications system using self-synchronization chua oscillators; Electronic letters. Vol.31, no.13; 22 June 1995; pages 1021-1022) recited in the IDS by Applicant.

Pinknet et al disclose a method, a chaotic transmitting circuit, a non-linear circuit element, a chaotic communication system, a chaotic receiver and transmitter, a chaotic telephone device, a method of demodulating a signal modulated according to a chaotic trajectory shift-keying technique, an apparatus and a method of recovering information transmitted through a communication channel wherein generating a chaotic carrier signal that causes oscillation of a voltage about first equilibrium point and changing in response to an information signal a non reactive resistive value in the circuit, shifting to a shifted first equilibrium point in the current-voltage phase space and oscillating between two equilibrium points wherein the current-voltage comprising of three linear segments and all limitations of claims 4-159 (see page 1021-1022, in specific left hand col. of page 1021).

10. **Claims 1-159** are rejected under 35 U.S.C. 102(b) as being anticipated by Tao Yang Chua (secure communication via chaotic parameter modulation;

Art Unit: 2132

IEEE transactions on circuits and systems; vol.43, no.9; September 1996; pages 817-819) recited in the IDS by Applicant.

Tao Yang Chua disclose a method, a chaotic transmitting circuit, a non-linear circuit element, a chaotic communication system, a chaotic receiver and transmitter, a chaotic telephone device, a method of demodulating a signal modulated according to a chaotic trajectory shift-keying technique, an apparatus and a method of recovering information transmitted through a communication channel wherein generating a chaotic carrier signal that causes oscillation of a voltage about first equilibrium point and changing in response to an information signal a non reactive resistive value in the circuit, shifting to a shifted first equilibrium point in the current-voltage phase space and oscillating between two equilibrium points wherein the current-voltage comprising of three linear segments and all limitations of claims 4-159 (see page 817-819).

11. Claims 1-159 are rejected under 35 U.S.C. 102(b) as being anticipated by Cuomo (5,291,555) recited in the IDS by Applicant.

Cuomo disclose a method, a chaotic transmitting circuit, a non-linear circuit element, a chaotic communication system, a chaotic receiver and transmitter, a chaotic telephone device, a method of demodulating a signal modulated according to a chaotic trajectory shift-keying technique, an apparatus and a method of recovering information transmitted through a communication channel wherein generating a chaotic carrier signal that causes oscillation of a voltage about first

Art Unit: 2132

equilibrium point and changing in response to an information signal a non reactive resistive value in the circuit, shifting to a shifted first equilibrium point in the current-voltage phase space and oscillating between two equilibrium points wherein the current-voltage comprising of three linear segments and all limitations of claims 4-159 (see abstract;fig.1-6 and col.3-4).

12. Claims 1-159 are rejected under 35 U.S.C. 102(e) as being anticipated by Tresser et al (6,064,701 A) recited in the IDS by Applicant.

Tresser et al disclose a method, a chaotic transmitting circuit, a non-linear circuit element, a chaotic communication system, a chaotic receiver and transmitter, a chaotic telephone device, a method of demodulating a signal modulated according to a chaotic trajectory shift-keying technique, an apparatus and a method of recovering information transmitted through a communication channel wherein generating a chaotic carrier signal that causes oscillation of a voltage about first equilibrium point and changing in response to an information signal a non reactive resistive value in the circuit, shifting to a shifted first equilibrium point in the current-voltage phase space and oscillating between two equilibrium points wherein the current-voltage comprising of three linear segments and all limitations of claims 4-159 (see abstract;fig.2-8 and col.3-7).

Claim Rejections - 35 USC § 103

Art Unit: 2132

13. Claims 1-159 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admittance of Prior Art (AAPA).

As per claims 1-159 Applicant admits in the specification page 1 and page 2, lines 1-5 that the modulations of carrier signals for transmission of information between two points is well known including chaotic signal (Also see fig.1a-d; 2b;6a-b) but states "the present inventors have discovered a technique for modulating the transmitting signal in a manner that results in much faster signal stability, thus reducing the amount of time required to synchronize the receiver and increasing the modulation bandwidth dramatically". Examiner refers Applicant to the following remarks:

It is noted that the features upon which applicant relies (i.e., the present inventors have discovered a technique for modulating the transmitting signal in a manner that results in much faster signal stability, thus reducing the amount of time required to synchronize the receiver and increasing the modulation bandwidth dramatically) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore by Applicant's admittance in absent of the above limitations in the claim language the claims 1-159 only states the prior art as Applicant has mentioned in page 1 and 2 of the specification.

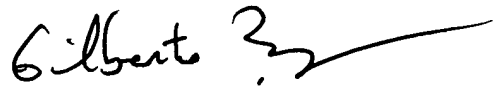
Conclusion

Art Unit: 2132

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Zand whose telephone number is (703) 306-4169. The examiner can normally be reached on Monday-Thursday (8:00-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone numbers for the organization where this application or proceeding is assigned as (703) 872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kambiz Zand

03/17/04


GILBERTO BARRON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100